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TS 1237

(67)

NEW SET OF CLAIMS

1. Method for the preparation of ethene, propene and butene by steam cracking, wherein the feed comprising heavy hydrocarbons obtained by Fischer-Tropsch synthesis, which Fischer-Tropsch hydrocarbons have an initial boiling point of above 150 °C and a final boiling point of below 400 °C, is subjected to steam cracking in a naphtha designed steam cracking furnace, wherein the furnace comprises a convection zone provided a first preheating zone in which the Fischer-Tropsch feed is heated, a second preheating zone in which the heated Fischer-Tropsch hydrocarbons are heated in the presence of steam to form a mixture of liquid and gaseous Fischer-Tropsch hydrocarbons; and a super heating zone in which the liquid and gaseous Fischer-Tropsch hydrocarbons are super heated; and a cracking zone in which the gaseous super heated Fischer-Tropsch hydrocarbons are steam cracked into ethene, propene and butene.
2. Method as claimed in claim 1, wherein the feed for the second preheating zone comprises less than 50 wt.%, preferably less than 25 wt.%, more preferably less than 10 wt.% liquid Fischer-Tropsch hydrocarbons.
3. Method as claimed in claims 1-2, wherein the weight ratio of steam to Fischer-Tropsch hydrocarbons is 0.4-0.8, preferably 0.5-0.75, more preferably 0.60-0.70.
4. Method as claimed in claims 1-3, wherein the Fischer-Tropsch hydrocarbons comprise more than 75 wt.% n-paraffines
5. Method as claimed in claim 4, wherein the n-paraffines have a carbon number of 10-20.

*Amended sheet*

6. Method as claimed in claims 1-5, wherein the Fischer-Tropsch hydrocarbons are essentially free of aromatic compounds, N-compounds and/or S-compounds.

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